CLAIMS

What is claimed is:

1. A septal defect occluder comprising:

(a) a shape memory frame with a proximal end and a distal end wherein the frame can be constrained to fit within catheter and when not constrained forms two opposing umbrella or disc shaped halves; and

(b) a biodegradable/biocompatible member covering at least a portion of the umbrella or disc shaped halves.

2. The septal defect occluder of Claim 1, wherein the frame is made from a metal tube having a plurality of slits.

3. The septal defect occluder of Claim 1, wherein the frame is made from a metal sheet having a plurality of slits.

4. The septal defect occluder of Claim 1, wherein the frame is made from at least one metal wire.

5. The septal defect occluder of Claim 1, wherein the frame is comprised of a Nitinol material.

6. The septal defect occluder of Claim 1, wherein the biodegradable/biocompatible member comprises a tube having a small diameter distal end, a small diameter center, and a small diameter proximal end with two larger diameter regions disposed between the center and the proximal and distal ends.

7. The septal defect occluder of Claim 1, wherein the biodegradable/biocompatible member comprises a first circular sheet placed over the distal end of the frame and a second circular sheet placed over the proximal end of the frame.

8. The septal defect occluder of Claim 1, wherein the biodegradable/biocompatible member comprises a plurality of threads.

9. The septal defect occluder of Claim 8, wherein the plurality of threads form a spider web-like structure when the metal frame is not constrained.

10. The septal defect occluder of Claim 1, wherein the biodegradable/biocompatible member comprises a copolymer of galactide and lactide.

11. A septal defect occluder comprising:

(a) a shape memory frame having a plurality of arms with a proximal end and a distal end wherein the frame can be constrained to fit within a catheter and when not constrained forms two opposing umbrella or disc-shaped halves, and the metal frame has a releasable attachment means located at the proximal end for attaching to a deployment member;

(b) a biodegradable/biocompatible member covering at least a portion of the umbrella or disc shaped-halves; and

(c) means for fixing the biodegradable/biocompatible member to the frame.

12. The septal defect occluder of Claim 11, wherein the frame is comprised of a metal tube having a plurality of slits.

13. The septal defect occluder of Claim 11, wherein the frame is comprised of a metal sheet having a plurality of slits.

14. The septal defect occluder of Claim 11, wherein the frame is comprised of at least one metal wire.

15. The septal defect occluder of Claim 11, wherein the frame is comprised of a Nitinol material.

16. The septal defect occluder of Claim 11, wherein the biodegradable/biocompatible member comprises a tube having a small diameter distal end, a small diameter center, and a small diameter proximal end with two larger diameter regions disposed between the center and the proximal and distal ends.

17. The septal defect occluder of Claim 11, wherein the biodegradable/biocompatible member comprises a first circular sheet disposed over the distal end of the frame and a second circular sheet disposed over the proximal end of the frame.

18. The septal defect occluder of Claim 11, wherein the biodegradable/biocompatible member is comprised of a plurality of threads.

19. The septal defect occluder of Claim 18, wherein the plurality of threads form a spider web-like structure when the metal frame is not constrained.

20. The septal defect occluder of Claim 11, wherein the biodegradable/biocompatible member is comprised of a copolymer of galactide and lactide.

21. A septal defect occluder comprising:

a support member having a first inflatable ring, a second inflatable ring and a membrane joined to said first and second rings at a common center thereof; and

an adhesive material adapted to fill said first and second rings upon deployment of said support member in a septal defect.

22. The septal defect occluder of Claim 21, wherein said support member is comprised of a biodegradable/biocompatible member.

23. A method of occluding a septal defect comprising the steps of:

(a) accessing the right side of the heart via a catheter;

(b) advancing the catheter through a septal defect;

(c) advancing a septal defect occluder having proximal and distal ends with a shape memory frame and a biodegradable/biocompatible member through the catheter;

(d) allowing the distal end of the occluder to form a preset shape in the left side of the heart;

(e) withdrawing the catheter and the occluder slowly until the distal end contacts the heart tissue around the opening of the defect;

(f) withdrawing the catheter until the occluder is fully deployed in the heart and the proximal end has formed its preset shape;

(g) removing the catheter from the patient;

(h) allowing the body to degrade the biodegradable member and cover the frame with native tissue.